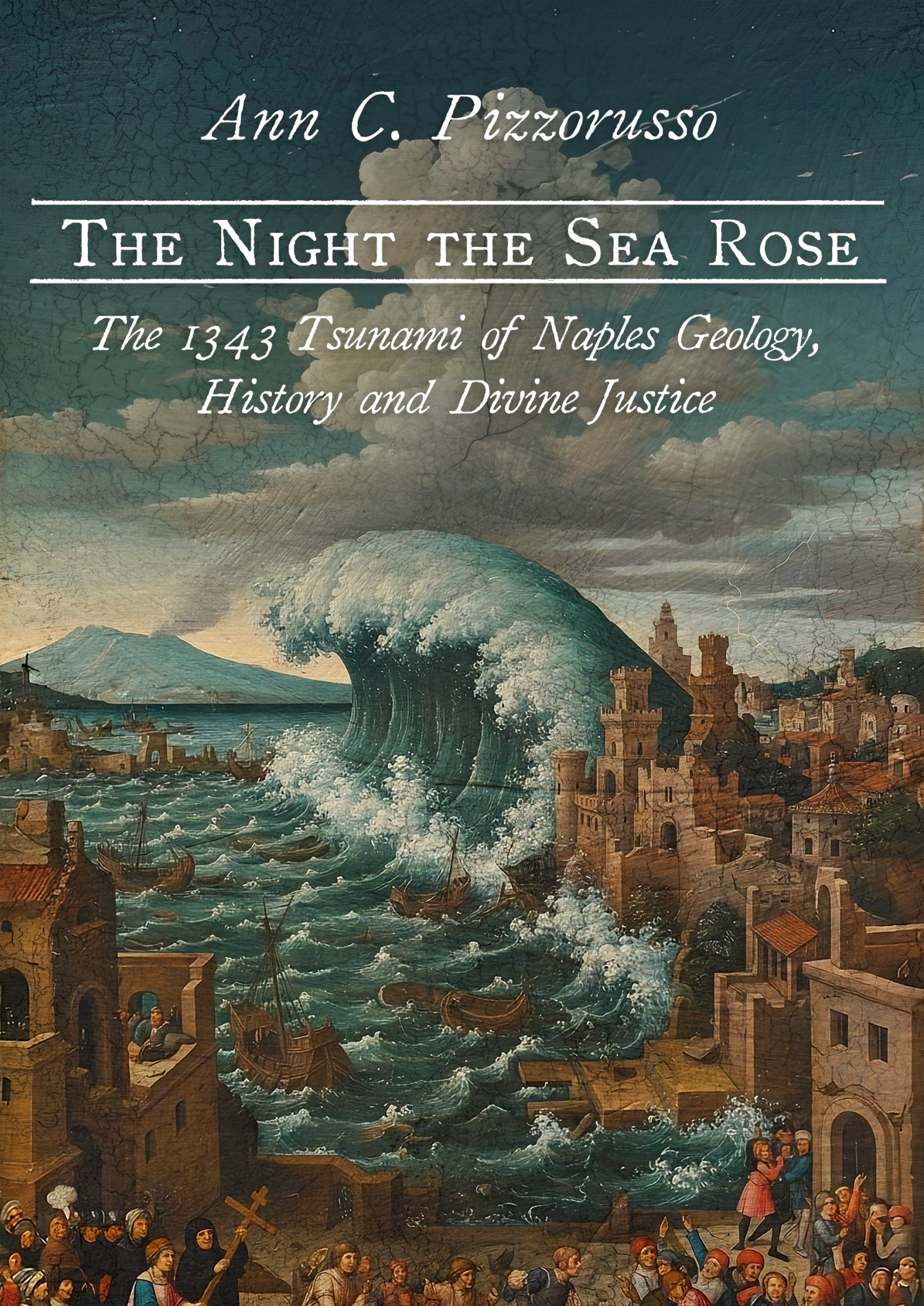
Ann C. Pizzorusso

The Night the Sea Rose

The 1343 Tsunami of Naples Geology, History and Divine Justice



The Night the Sea Rose

The 1343 Tsunami of Naples

Geology, History and Divine Justice

by

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Abstract

On the night of 25 November 1343, the port of Naples was struck by a sudden and violent tsunami. The event destroyed nearly every ship in the harbor, devastated coastal settlements such as Amalfi, and left deep marks on the material and spiritual life of the Kingdom of Naples. Contemporary sources also mention violent winds and heavy rain, suggesting that a storm surge may have coincided with the seismic event, amplifying its destructive power. Among those who witnessed the disaster was the poet Francesco Petrarca (Petrarch, 1304–1374). His description in *Familiares VIII.2* remains one of the earliest literary eyewitness accounts of a tsunami in European history.[1]

The tsunami struck at a moment of fragility: famine had afflicted Naples, linked to the Little Ice Age (1300-1850)[2] and tensions surrounded the succession of Queen Joanna I of Naples (1328–1382),[3] who had assumed the throne after the death of her grandfather Robert of Anjou (1277–1343). The natural disaster was thus quickly interpreted as divine punishment; a symbolic warning that fused nature, politics, and religion.

Using modern geologic methods to analyze the various explanations for the origin of the 1343 tsunami, this article situates the event within its medieval historical context and examines how contemporary observers sought meaning in its aftermath. It highlights how a natural disaster was woven into historical narratives of sin, guilt, providence and political intrigue.

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[1] Francesco Petrarca, Epistolae Familiares, VIII.2, in Le Familiari di Francesco Petrarca, ed. Vittorio Rossi (Florence: Sansoni, 1933).

[2] Peter Huybers, "The Little Ice Age: Mechanisms and Historical Impacts," Annual Review of Earth and Planetary Sciences 34 (2006): 13–35.

[3] Jeremy Black, Italy and the Wider World: 1343–1796 (London: Routledge, 2015.

Origin of the Naples Tsunami

On the night of November 25, 1343, the cities of Naples and Amalfi were struck by one of the most catastrophic tsunamis in Mediterranean history. Eyewitnesses such as Francesco Petrarca (Petrarch, 1304–1374) described the towering waves that devastated ports, drowned ships, and reshaped the shoreline. To many contemporaries, this was no mere act of nature; it was divine punishment.

Fortunately, we now have modern bathymetric surveys to aid our understanding of the event from a geologic perspective. One such survey, along the Sorrento margin revealed scars consistent with ancient slope failure, lending support to the hypothesis of asubmarine landslide origin[4].

We also have The Euro-Mediterranean Tsunami Catalogue[5]. It has data from circa 6150 BCE to the present and lists some 293 events. Additionally, ancient sources also attest to tsunami occurrences as seen historic narratives:

- Thucydides (5th c. BCE) linked earthquakes to sudden sea retreats and floods[6].
- Pliny the Younger described similar phenomena after the eruption of Vesuvius in 79 CE[7].

In looking to explain tsunamis, we need to focus on the geology of southern Italy. The Mediterranean basin, particularly the Tyrrhenian Sea, sits atop a zone of intense tectonic interaction between the African and Eurasian plates. This collision has produced the region's dramatic volcanism --- from Vesuvius and Campi Flegrei near Naples to Stromboli and Etna further south --- and its frequent earthquakes and submarine landslides.

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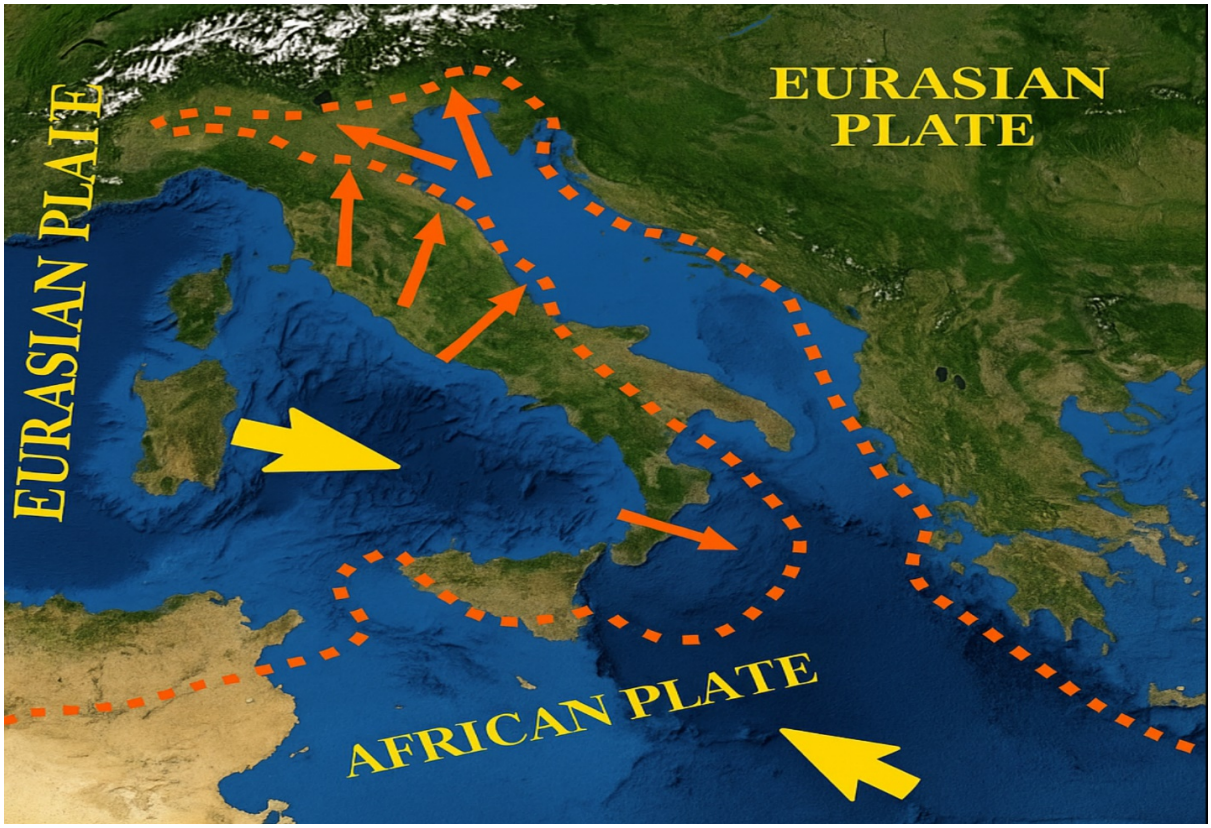
[4] Giulio De Alteriis, "The Submarine Morphology of the Bay of Naples and Its Implications for the 1343 Event," Italian Journal of Geosciences 114, no. 3 (1995): 387–401.

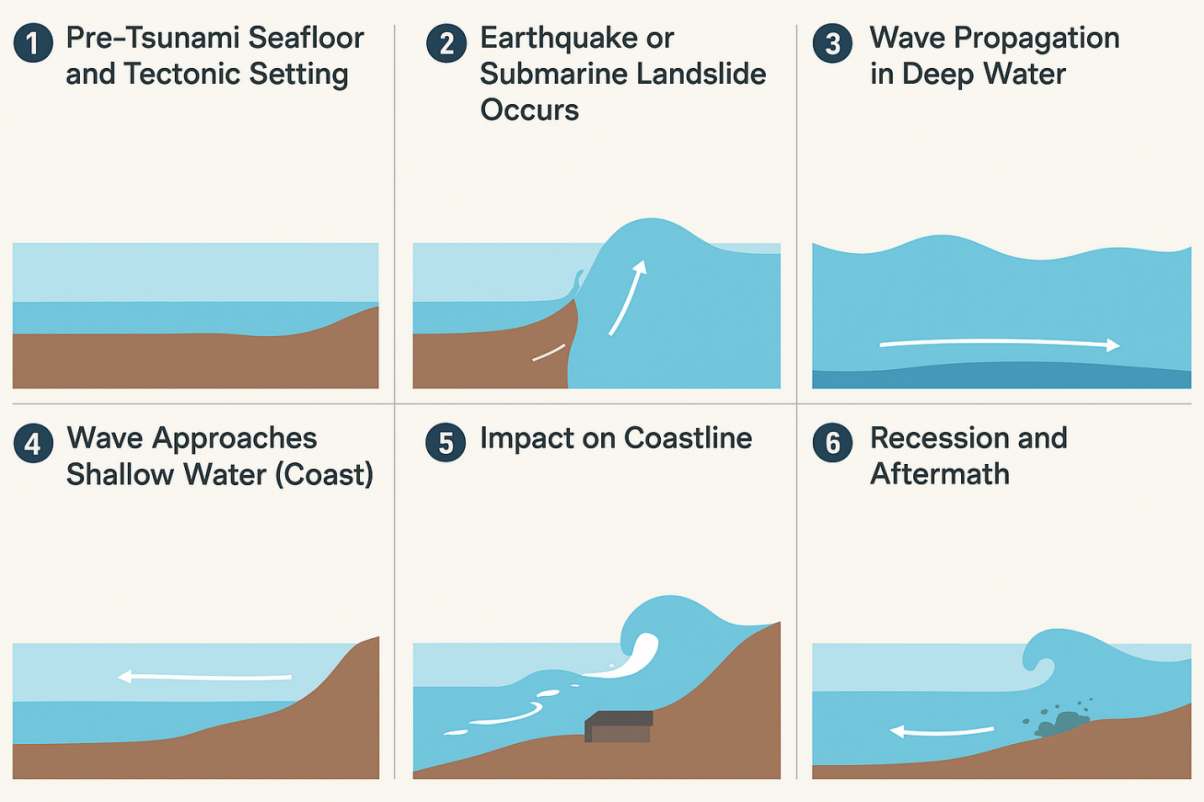
[5] Brian C. J. Moore, "The Tsunami Catalogue for the Mediterranean: A Geological Review," Natural Hazards 31 (2004): 83–98.

[6] Thucydides, *History of the Peloponnesian War,* trans. Rex Warner (London: Penguin, 1972), 3.89

[7] Pliny the Younger, *Letters,*6.20, trans. Betty Radice (Cambridge, MA. Harvard University Press, 1969)



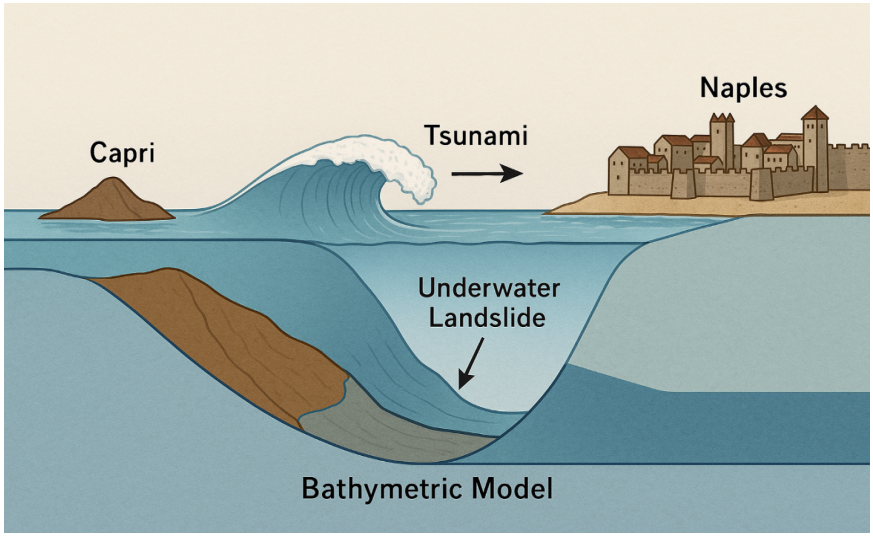
Mediterranean tsunamis are typically generated by submarine earthquakes, volcanic eruptions, flank collapses and submarine landslides. In semi-enclosed seas like the Tyrrhenian, even a modest displacement of the seafloor can result in forming destructive waves when energy is trapped within coastal basins.


1 Pre-Tsunami Seafloor and Tectonic Setting
2 Earthquake or Submarine Landslide Occurs
3 Wave Propagation in Deep Water
4 Wave Approaches Shallow Water (Coast)
5 Impact on Coastline
6 Recession and Aftermath

Several scientific explanations have been proposed for the 1343 tsunami.

The Capri--Sorrento shelf 26 miles (42 km) south of Naples is composed largely of limestone and dolomite, steeply incised and prone to collapse. A submarine landslide along this carbonate slope could have released enormous volumes of rock and sediment, displacing the overlying water and generating a powerful, localized wave. Such an event would explain why destruction was largely confined to Naples, Amalfi and their harbors. The sixteenth-century historian Angelo di Costanzo,[8] drawing on earlier traditions and chronicles, describes the 1343 catastrophe in striking terms: the sea, he writes, rose in "white waves" that foamed into the harbor, overturned ships, and destroyed the piers of Naples. His commentary might not be merely a metaphor of a pure white wave destroying a corrupt city, but an accurate account of the effects of the local geology; namely the optical effect of suspended carbonate particles which can turn the sea a milky hue when stirred by violent underwater movement.

[8] Angelo di Costanzo, Historia del Regno di Napoli, vol. 1 (Naples: Giuseppe Severini, 1581), 479–481.



Possible route of tsunami from Capri to Naples and Amalfi.

Some modern studies have proposed that the 1343 tsunami originated from a submarine landslide or volcanic collapse near Stromboli, 150 miles (240 km) to the south. Mauro Rosi et al.[9], link the tsunami to a partial collapse of Stromboli's *Sciara del Fuoco* — a volcanic talus scree or depression that may have failed around 1350 CE. While physically possible, these hypotheses remain uncertain. No contemporary reports from Calabria or Sicily mention comparable damage, as such records might be expected if the wave had propagated broadly through the Tyrrhenian basin. It is conceivable, however, that the tsunami traveled largely through deep water, its energy invisible along steep southern coasts until it shoaled and

[9] Mauro Rosi, Roberto Funiciello, and Giuseppe Mastrolorenzo, "The 1343 Tsunami in the Bay of Naples: A Hypothesis of Volcanic Collapse at Stromboli," Natural Hazards and Earth System Sciences 10, no. 2 (2010): 201–214.

concentrated within the enclosed Bay of Naples, where the sudden shallows of the port transformed it into a destructive surge.

Possible route of tsunami from Stromboli toward Naples and Amalfi.

Given the island of Ischia's history of volcanic instability (notably the 1302 Arso eruption), another possible origin is a collapse on its submarine flanks[10]. Ischia lies in the Gulf of Naples, close enough to produce devastation in Naples and Amalfi.

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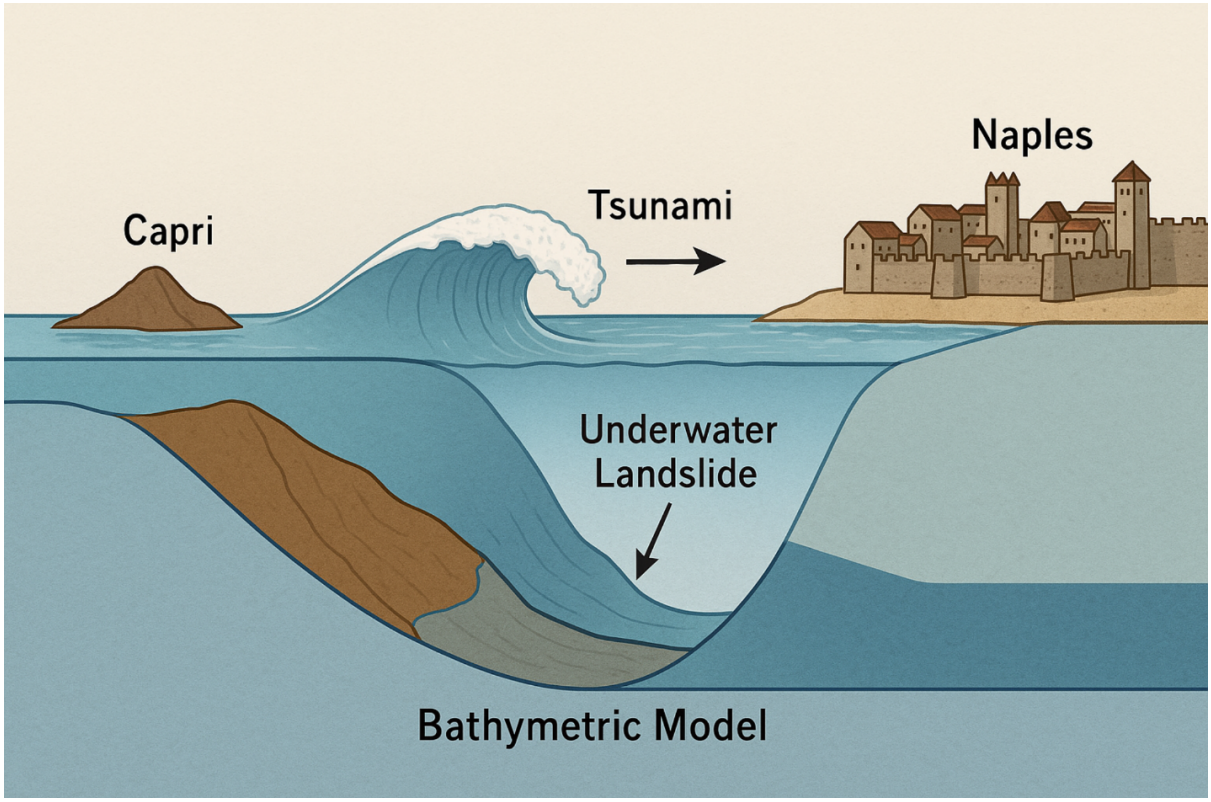
[10] Luigi Chiocci and Giulio De Alteriis, "The Ischia Debris Avalanche: A Major Landslide Event in the Tyrrhenian Sea," Marine Geology 213 (2004): 1–19.

Based on modern tsunami shoaling principles, the wave would have behaved as follows: In deep waters near the source, the tsunami's amplitude may have been small, barely noticeable at sea. As it traveled toward the shallower coastal shelf, its speed decreased while its height increased, concentrating energy. Upon reaching Naples and Amalfi, it would have surged upward into a towering wall of water, causing massive flooding and destruction.



Medieval Naples: *A Center of Power and Culture*

In the fourteenth century, Naples was not merely a royal capital but a living synthesis of faith, intellect, and art. The Angevin kings, eager to rival the courts of northern Italy and France, transformed the city's skyline with the royal palace, Castel Nuovo (Maschio Angioino), designed by the French master Pierre de Chaulnes, and the new Cathedral of San Gennaro, whose relics and miracle of the blood proclaimed divine protection for the realm. Around these monuments rose the great churches of the mendicant orders: the Franciscan church of Santa Chiara, founded by King Robert and Queen Sancia as a house of royal simplicity, and the Dominican church of San Domenico Maggiore, where Thomas Aquinas had once studied and taught, and where Dominican scholars kept alive the dialogue between faith and reason. The Florentine painter Giotto brought in a new language of naturalism, adorning the royal chapel of the Maschio Angioino and the Franciscan cloisters of Santa Chiara with frescoes now lost but long remembered.

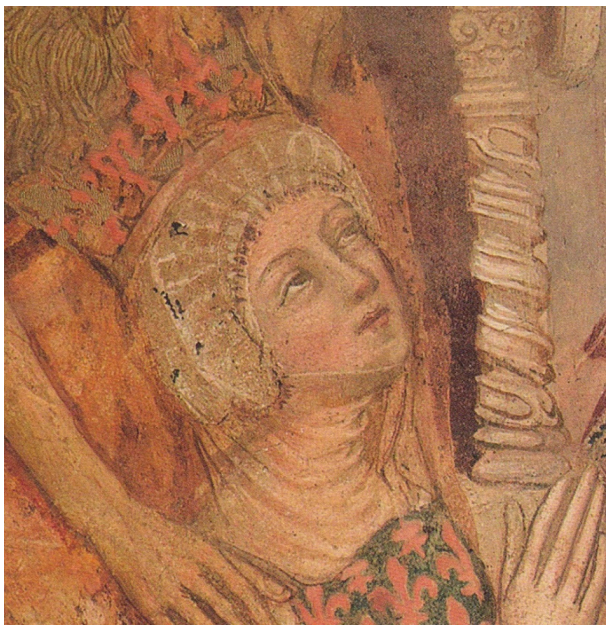
Founded a century earlier (1224) by Emperor Frederick II, the University of Naples embodied the city's other calling -- the pursuit of knowledge as a civic and royal enterprise. It was Europe's first secular university, established not by pope or clergy, but by the crown itself, where law, philosophy, and medicine served the practical needs of governance. The university also distinguished itself by its egalitarianism; Franciscan and Dominican friars lectured in its halls, and disputations often blurred the lines between theology, reason and revelation. It was in this atmosphere that a young Giovanni Boccaccio also studied and discovered both classical learning and the courtly passions that would shape his later tales.

An unlikely spirit of the ancient world found new life in medieval Naples. The Roman poet Virgil (70 BCE-19 BCE) was recast as a magician and civic protector and tasked with safeguarding the city and its inhabitants from plague, sorcery and misfortune. Having lived and died in the city, Virgil was believed to be buried at Posillipo, where his tomb became a site of pilgrimage and veneration. Petrarch himself visited the poet's tomb in 1343, seeking

inspiration in its quiet grotto only months before witnessing the tempest that shattered the harbor.[11]

Naples in these years stood as the bright heart of a Mediterranean humanism; a city of friars and scholars, of miracles and manuscripts, where the sacred and the secular, the rational and the mystical, existed side by side. It was a city that believed knowledge, beauty, and piety could hold the world in balance -- until, at the end of 1343, the sea proved otherwise.

Under King Robert of Anjou (reigned 1309-1343), Naples was a thriving metropolis, but by autumn 1343, the city was in decline. The Little Ice Age (c.1300--1850) had shortened the growing seasons, leading to famine and unrest. The climatic downturn had already devastated much of Europe during the Great Famine of 1315-1322, leaving Naples vulnerable to renewed scarcity. King Robert's death in January 1343 left his granddaughter, the young Queen Giovanna I (1328–1382) politically vulnerable[12]. Within the city, desperation soon erupted into violence. In November 1343, just weeks before the tsunami, a Genoese ship carrying grain from Sicily docked at Baia, a port near Naples. Starving locals -- possibly under royal orders -- seized the cargo and murdered the captain. The Genoese *Annales lanuenses*[13] describe this episode in detail, though historians debate whether royal authorization was explicit or merely tolerated. Chroniclers across Italy later interpreted the tsunami that followed as God's punishment for this act of bloodshed and theft.



Queen Joanna I

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[11] Petrarca, Epistolae Familiares, VIII.2

[12] Elizabeth Boyle O'Reilly, Queen Joanna I of Naples: A Historical Biography (New York: Sheed & Ward, 1937), 21–25.

[13] Annales Ianuenses, ed. Georg Heinrich Pertz, Monumenta Germaniae Historica, Scriptores, vol. 18 (Hanover, 1863), 155–160

Petrarch's Account of the Tsunami

The poet Francesco Petrarca (Petrarch, 1304–1374), happened to be in Naples in late 1343 on papal business and witnessed the destruction of the port. Petrarch's eyewitness testimony remains the most vivid description of the event. In a letter to his friend Giovanni Colonna in early 1344, he wrote:

"On the evening of the 25th of November, while the winds blew strong, the sea suddenly lifted itself with unheard-of violence, and ships in the harbor were dashed against one another as though they were toys. In that instant, the works of men were scattered, and the city trembled as though the end of all things were at hand."[14]

In another letter,[15] Petrarch captures the moment the earth trembled and the sea rose: *"A noise and an earthquake woke me, which not only opened the windows and extinguished the lamp, but moved the room where I was to its foundations… No ship withstood the waves… Only one among many, laden with criminals, was saved."* This "ship of criminals," (a ship of some 400 destined for Sicily) spared amid destruction, became a symbol of divine irony -- that the guilty lived while the innocent perished.

Fifteen century engraving of the Naples tsunami of 1343.

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[14] Petrarca, Epistolae Familiares, VIII, 2.

[15] Petrarca, Epistolae Familiares V, 3.

While Petrarch conferred with the ruling class and wrote of his experience to colleagues in Latin, the populace was already on high alert by a prediction from a priest on the island of Ischia (just offshore in the Gulf of Naples). Using astrological calculations, he predicted an "earthquake" forecasted for November 25. Although no astronomical records confirm the prediction, the story circulated widely, illustrating how medieval societies sought divine patterns in natural phenomena. This fueled terror throughout the area as Ischia itself was prone to earthquakes and volcanic eruptions (notably the Arso eruption of 1302). Though astrology was officially condemned, it exemplifies the porous boundary between astrology and Christian theology in the fourteenth century. Although Church authorities condemned astrology when it seemed to undermine divine providence, many clerics practiced forms of celestial interpretation, particularly for natural events. If the prophecy was truly given before the tsunami, contemporaries would have viewed the disaster as divine confirmation of astrological insight. This tension -- between faith, superstition, and natural explanation -- reflects how medieval society sought to impose order on catastrophe. Such interpretations reveal an enduring human impulse to find meaning in chaos, a need that bridges the medieval and modern worlds.

The tsunami was not just a natural event, but also a political and symbolic crisis -- divine judgment on rulers. King Robert of Anjou, had ruled Naples since 1309 and died in January 1343, only months before the tsunami. His granddaughter Joanna I was only about 17 years old when she inherited the throne. Her succession was immediately contested as the papacy in Avignon still exercised suzerainty over Naples and the Hungarian branch of the Angevin dynasty claimed rights to the throne.

With her city struck so violently, Joanna I, (who was actually queen designate, as she would not be formally crowed by papal authority until August 1344) left the royal palace with unbound hair and barefoot. She marched to church with the populace where in a display of humility she performed penitential acts. Her gestures embodied both royal remorse and collective atonement for Naples' sins. Yet, despite her actions, a sense of "heavenly wrath" or judgment on Naples and its rulers circulated in clerical writings, reinforcing the impression that Joanna's succession lacked divine favor.

Nearby, the once-great maritime republic of Amalfi, already in decline since the 11th century, also suffered catastrophic damage. Chroniclers wrote that the sea "swallowed a third part of its soil," erasing much of its port and marking a severe blow to its trading power.

Coincidentally, that same night, November 25, 1343, the sinkhole of *ll-Maqluba* in Qrendi, in Malta, reportedly collapsed[16], a geological event later woven into legend. Local tales claim that a wicked village was swallowed by the earth, and that a tidal wave destroyed a Turkish fleet offshore. Modern geology, however, confirms *ll-Maqluba* as a natural doline (sinkhole) caused by the collapse of limestone strata, not by a tsunami. The earliest Maltese references

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[16] Carmel Mallia, "The Geological Origin of Il-Maqluba, Qrendi (Malta)," Melita Historica 12, no. 2 (1998): 145–152

to *Il-Maqluba* appear only in fifteenth-century chronicles, suggesting legend later retrofitted moral meaning to an older geological event.

In the medieval worldview, nature was not a neutral background but a living mirror of divine will. The concept of anagoge, the spiritual reading of natural and historical events as signs of higher cosmic truths, shaped how disasters were understood. The 1343 tsunami, therefore, was not seen merely as water and rock in motion, but as a revelation. The receding sea, the roaring wave, and the sudden calm afterward were all read as symbols: of sin, punishment, and the possibility of redemption. Where modern science sees submarine landslides and seismic triggers, the medieval mind saw the language of God inscribed upon the sea.

While we do not have an estimate of lives lost, we do know that Petrarch survived the night in Naples, likely lodging in the harbor district, near the portside royal palace, Maschio Angioino, where he was directly exposed to the destruction. Unlike many contemporaries, Petrarch perceived the event through an anagogical lens: the sea's fury as both natural phenomenon and moral allegory, a symbol of the turbulence of human existence and divine order's mystery. In his early letters, he frequently described nature: mountains, rivers and storms, as mirrors for the soul, capable of provoking awe but also introspection. His famous transformational ascent of Mont Ventoux in France in 1336 illustrates this contrast: while peasants feared devils on mountain peaks, Petrarch saw an opportunity for moral and spiritual elevation. His reflections on the 1343 tsunami thus embodied the tension between medieval fear of nature and what would emerge as the Renaissance view of nature as sublime.[17]

The robbery and murder of the Genoese ship's captain, occurring so close to the tsunami also offered contemporaries a powerful narrative of divine retribution. Whether or not Joanna I was complicit remains uncertain, but the timing would have cast suspicion upon her reign. To contemporaries, the coincidence was almost too clear: theft, murder, and sacrilege followed swiftly by natural disaster.

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[17] Robert Bartlett, The Natural and the Supernatural in the Middle Ages (Cambridge: Cambridge University Press, 2008), 71–84.

Recovery and Memory

After the destruction, the Angevin court had to muster resources from an already strained treasury as it was necessary to rebuild the fleet and port facilities. What no one knew however, was that the tsunami of 1343 marked only the beginning of continued devastation for Naples. There would be ongoing famine, invasion by Hungarian forces (1347) (seeking to avenge the murder of Queen Joanna's husband)[18] and ultimately the Black Death (1348).

Though the 1343 tsunami slipped into the margins of history, its study bridges two worlds: the medieval search for meaning and the modern science of geology. Where we now use seafloor mapping, seismic modeling and satellite altimetry to trace submarine landslides and tectonic shifts[19], the people of fourteenth-century Naples had only prayer, ritual, and faith to interpret the sea's fury. For those who endured famine, invasion and plague in the years that followed, such interpretations offered not only explanation but endurance, a framework for hope amid loss. To revisit this event is to look through many lenses --scientific, historical, and spiritual -- and to recognize that amid ruin and uncertainty, every age reaches for its own explanation, and for its own kind of hope.

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[18] See details in Appendix.

[19] Brian C. J. Moore, "The Tsunami Catalogue for the Mediterranean: A Geological Review," Natural Hazards 31 (2004): 83–98.

Appendix:

The Murder of Andrew of Hungary (1345)

In the early years of her reign, Queen Joanna I of Naples faced one of the most sensational and politically disastrous crimes of the fourteenth century -- the murder of her husband, Andrew of Hungary, in September 1345. Andrew, the younger brother of King Louis I of Hungary, had been betrothed to Joanna in childhood to strengthen Angevin ties between Naples and Hungary. Despite being crowned prince consort, his authority was resented by the Neapolitan nobility, who saw him as an outsider and feared the growing influence of the Hungarian court. During a royal stay at the palace of Aversa, Andrew was attacked at night, strangled, and thrown from a window by conspirators believed to include members of the Neapolitan court and possibly allies of Queen Joanna's faction. The brutality of the murder shocked Europe, and although direct evidence of Joanna's complicity was never proven, rumors of her involvement spread rapidly.[1]

The killing of Andrew set off a chain of political and spiritual crises that reverberated throughout the kingdom. King Louis of Hungary invaded southern Italy in 1347 to avenge his brother's death, prompting chaos in Naples and forcing Joanna to flee to Provence. Papal authorities launched an investigation that cleared her of direct guilt, but suspicion lingered for years.[2] The crime intensified perceptions that divine punishment had fallen upon Naples -- first through the 1343 tsunami, then through famine, invasion, and plague -- shaping a moral narrative in which natural and political disasters were interpreted as signs of heavenly justice. In this sense, Andrew's murder became part of the same spiritual framework that defined medieval understandings of catastrophe: every tragedy was a mirror of sin, penance and divine order.

1. Elizabeth Boyle O'Reilly, Queen Joanna I of Naples: A Historical Biography (New York: Sheed & Ward, 1937), 56–64.
2. Nancy Goldstone, The Lady Queen: The Notorious Reign of Joanna I, Queen of Naples, Jerusalem, and Sicily (New York: Walker & Company, 2010), 78–82.

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